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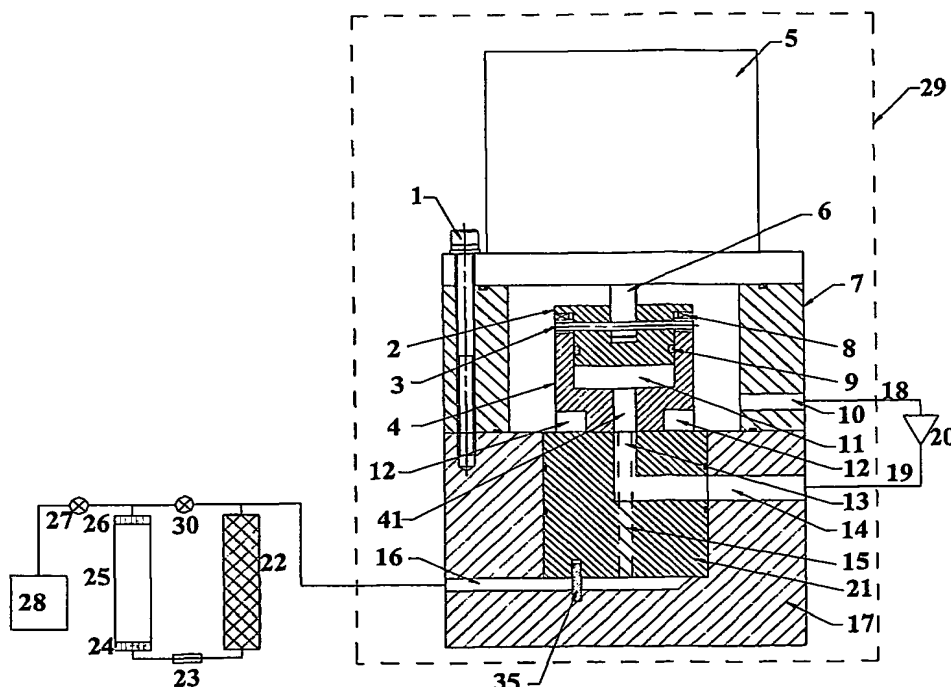
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(54) Title: REDUCED TORQUE VALVE FOR CRYOGENIC REFRIGERATOR



(57) Abstract: A rotary valve unit which reduces the torque required to turn the valve disc, and the amount of wear dust that is blown into the cold head, using differential gas forces to keep the valve disc in contact with the valve seat, and which enables larger diameter valve discs to be utilized for multi-ported pulse tubes that have less force on the face of the valve disc, resulting in reduced torque and reduced wear rate.



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